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DONALD GORDON MOAR

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IN

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DEPARTMENT OF ART AND DESIGN

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**The Preservation of Wonder:**  
**A Nature Museum and Retreat for Elk Island National Park**

**Donald Gordon Moar**

Thesis submitted in partial fulfillment of the requirements for  
the degree of Master of Design  
in Industrial Design, University of Alberta  
September, 2000





## Abstract

Canada is 'running out' of wilderness resulting in less opportunities for children and families to experience unspoiled nature. Efforts are needed to educate the public regarding the importance of habitat and ecosystem preservation. This proposal facilitates the delivery of this critical message.

This thesis reviews the designs of other pertinent museums and exhibits. It examines the history of the national park system and its mandate and attitudes, with a particular emphasis on Elk Island National Park. This thesis also presents discussions with its target audience, investigates school curriculums and considers how children learn. In addition, this thesis explores the roles of science and art in the communication of a holistic message regarding ecology.

This thesis proposes the design of a Nature Museum and Retreat, and exhibits for Elk Island National Park. The museum is specifically geared towards children, but is suitable for adults as well. It is similar in size and scope to such notable museums as the Royal Tyrrell Museum of Paleontology and the Reynolds Alberta Museum, but has a number of features setting it apart from these other institutions. The buildings and the exhibits share a common vision - something that is crucial to the success of today's museums. The design approach is more artistic, experiential and interactive, and less pedantic than most museums. The museum is used as a starting point for a natural experience - it provides a base for the entire park to be used as a 'classroom' for visiting students of all grades. Interpretive programs encourage visitors to experience the various ecosystems in the park and understand the importance of their preservation.

The design also includes a residential component that permits families or groups to spend entire weekends or longer immersed in specific interpretive programs. Access to natural areas for children has recently been substantially reduced due to industrial activity, urban sprawl and safety considerations. This museum allows families to experience and understand nature safely and comfortably.

Another important component to the museum is the opportunity to celebrate the connection between nature and art. The residential component provides the opportunity for seasonal artist retreats, and a special exhibits area displays and promotes the results of these retreats and other travelling exhibits. The facility will generate visitorship and educate people about the importance of ecosystems and the preservation of wonder.

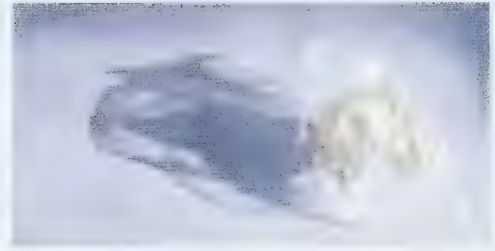




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## Introduction



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### **A. Definition of Scope:**

This thesis involves the research and design of a Nature Museum and Retreat for Elk Island National Park. It consists of the design of both the building and exhibit components of the museum, and the design of the outbuildings required for the retreat component.







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## B. Problem Statement:

*"In wildness is the preservation of the world."*

- Henry David Thoreau (Devall 13)

Wilderness in Canada and throughout the world is disappearing at an alarming rate. Opportunities for children and families to experience 'true' nature, as opposed to 'managed' nature, or 'virtual' nature are decreasing. Prior to the now popular environmental movement, and the even more recent, onslaught of today's 'cyberworld'. L. Hugh Neuman stated that "as man has become more civilized he has tended to move so far into his own artificial world that he has lost contact with nature" (7). We exist in an environment in which almost everything is 'packaged', including experiences, where value is attributed to dead things, things that go *beep* or *buzz*, rather than living things.



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Today, children live in a 'virtual' world, one which is electronically-produced and stagnant. These computer environments are dominated, for the most part, by cynical, destructive elements. As a result, children are rapidly losing touch with the real or natural world. Noted ecologist, David Suzuki wonders, "how does our contact with nature

affect us, and what are the consequences when we are deprived of it?" Holt, in his book, How Children Learn, states that "children these days are very early hooked by the mass media. We are seeing something new in human history, a generation or two of children who have most of their daydreams made for them" (239). A world where children actively employ their own imaginations; where they are free to explore their world, rather than being 'force-fed' the 'virtual' world of someone else's imagination is necessary. This is imperative, not only for their own sense of well-being, but for the way in which they will learn to value the world around them. At the end of Alice's Adventures in Wonderland, Lewis Carroll beautifully portrays youthful imagination:

But her sister sat still just as she left her, leaning her head on her hand, watching the setting sun, and thinking of little Alice and all her wonderful Adventures, till she too began dreaming... (and) ...the whole place around her became alive with the strange creatures of her little sister's dream. (163)



Presently, children's 'wonderlands' are artificially created. The 'looking glasses' they enter are the computer screens that occupy so much of their time. The scope of children's imagination seems to be shrinking. This project endeavors to redress aspects of this recent trend.



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Another interesting paradox regarding children's imagination and their view of nature is presented by the mass media's depiction of the natural world. Coupled with the pervasive nature of the electronic world, the image of nature has forever been altered in the eyes of children by its portrayal in Disney and Disney-type animated movies. Burgess in Keepers of the Springs, comments that "the 'Disney syndrome' featured people's kinship with animals. This was part of the impetus that drew people to parks. It ignored the fact that animals exist in the wilderness on their own terms" (132). While Disney's animations are quite enjoyable and imaginative, children should have the opportunity to experience genuine wilderness in order to balance the 'indoctrination' of an 'engineered' nature.

Corporations would have us believe that all is well with the wilderness, however, they actively conceal the truth. Wilderness areas in Canada **are** threatened and are "indeed, endangered spaces" (Littlejohn 17). In Canada's boreal forest, which is almost as large as the Amazon rain forest, nearly every tree is earmarked to become pulp.

Monte Hummel in Endangered Spaces: The Future for Canada's Wilderness asks, "do we see wilderness as obsolete, a part of Canadian society that we have outgrown? Are we ignoring the inevitable, daily limiting our options through inaction and facing the prospect of meekly explaining to our children what we should have done?" (9). Rick Searle comments that "when confronted with the environmental damage accumulating from our individual choices, we cross our fingers and say our prayers to the gods of science and technology to bail us out" (164).

Society needs to reconsider its attitudes towards the concept of 'wilderness'. Even Rogel's Thesaurus denotes the synonym of 'wilderness' as 'wasteland', and the antonym as 'heaven'. Wilderness has been thought of as something to be conquered or tamed. Canadians, and humankind in general, must come to realize the importance of a holistic view of nature. Science and industry do not 'see the forest for the trees'. An emphasis must be placed on the importance of preserving the entire ecosystem - a forest is much more complex than just a stand of trees. "We can only hope to understand ecosystems - and conserve them - by adopting an ecological world view based on a systems perspective" (Searle 127). To convey this message to the public, a 'vehicle' is needed which gives families a chance to experience authentic wilderness, and in doing so, increase





their awareness and understanding of the importance of the ecosystem and a holistic view of nature.

In the West our understanding of the world has been largely shaped through science which, until this century, has sought to understand the world by dissecting it, bit by bit. But this approach leaves unanswered the question of how the parts interact to sustain life and evolve. A shift in perspective is now occurring in many disciplines towards a focus on whole systems instead of constituent parts. (Greig 4)

Searle describes nature as existing in “nested hierarchies - much like those Russian dolls that are housed one inside each other” (127). Up to now, we have failed to understand and appreciate the natural world as a global ecological system made up of smaller ecosystems. The Nature Museum and Retreat that this thesis proposes for Elk Island National Park is intended as a paradigm to present a holistic message of nature. It will stress the importance of the ecosystem and the preservation of the wonders of nature.

### C. Choice of Location (Why Elk Island National Park?):

Canada’s national parks have been referred to as “arks” (Edwards 27), sanctuaries for the nation’s endangered flora and fauna, or as “research laboratories” (Burgess 86). Many have also suggested that our national parks could be considered ‘living museums’: “What a record they provide in addition to their prime role of vibrant natural museums, in species conservation, as guardians of scenic grandeur, and wilderness spaces” (Burgess 2,3).



But what *is* the definition of a museum? A museum has been defined as “the collection and conservation of materials for posterity” (Hall 7). This is the primary reason why the federal government of Canada has set aside areas as national parks - to protect these areas for future generations. Yet, this need to preserve and protect must be balanced with the somewhat conflicting and growing pressures to use our national parks for recreational activities. Yorke Edwards, commenting on the conflicting roles of national parks, says that “in general, two enthusiasms prevail: attracting tourist dollars and preserving natural history” (27). The consequence of this dual, sometimes conflicting, mandate is a challenge to manage this tension between use and protection. Many national parks are threatened, and are in danger of being ‘loved to death’. Yet, the total exclusion of recreational users from the parks is not desirable, because contact between the public and nature increases public and political support for wilderness preservation.

As more wilderness areas are lost, pressure keeps increasing on the few that remain. Today, people are aware of the merit of nature to their souls or their spiritual well-being, just as Thoreau was so many years ago: “There can be no very black melancholy to him who lives in the midst of Nature and has his senses still” (176). “While many of us still enjoy our natural vistas from cars, determined to venture no closer to wilderness than smooth and dustless roads will take us, many others enter wild places quietly as would a wild creature, and find freedom, peace, and memorable experiences that enrich our lives” (Edwards 28).



Considering that the painter, Paul Klee has often referred to nature as “the best school” (Verdi 24), Elk Island National Park could be considered an ‘outdoor classroom’. Elk Island offers the perfect opportunity to educate people about a holistic view of nature - that the world is an entire system, made up of smaller ecosystems. A Nature Museum and Retreat serves to enhance the lessons taught in this ‘classroom’. Elk Island is a managed wilderness area, not a pristine one that would be overly sensitive to intrusions. It is a national park that in recent years has had a reduction in visitorship, yet, it is located within minutes of an urban population of almost 900,000 people. Judith Cornish, in Finding Birds in Elk Island Park, describes Elk Island as “a special kind of National Park. It has no ski resorts, no mountain teahouses, no night life. It is simply a place to experience a natural environment. It is also a world of great complexity and richness where all of us, at our various levels of expertise, remain students, challenged by nature to watch and learn” (63).

National Parks are not, and should never be, open for development. Facilities such as ski resorts, luxury hotels, convention centres, fast food restaurants, shopping malls, and golf courses do not belong in wilderness areas. Banff National Park provides evidence to the types of disasters that occur when development becomes more important than preservation. The majority of facility development should not be allowed to happen, or continue to happen, in national parks, particularly in those that have high risk, sensitive ecosystems. However, there is one valid reason for development in the parks - one that *is* within the national park mandate, and that is to educate, particularly if the instruction involves the preservation of such valuable areas. Rick Searle, in Phantom Parks: the struggle to save Canada’s national parks, submits that “as befits a holy place, the only use that is appropriate is that which reconnects us to the wildness that dwells within the park’s boundaries and that lies waiting to be released at the core of our souls” (215). The Nature Museum and Retreat proposed by this thesis fits under this ‘umbrella’, and is located in a ‘managed’ environment that can tolerate and benefit from such use. The Edmonton area has other nature centres that provide education about protecting the environment, such as the Bennett Centre and the John Janzen Nature Centre, but they are less successful due to their urban locations. To really understand nature and wilderness, and to understand its ‘message’, one needs to be immersed in it - to see, hear, touch, taste, and smell wilderness. Direct experience is necessary for the opportunity to establish a relationship with all living things.

The proposed Nature Museum and Retreat in Elk Island National Park encourages people to protect and preserve Canada’s wilderness legacy for future generations. It is the center of focus for an interpretive program based in an ‘outdoor classroom’. Interpretation is an important element in today’s national park system. It provides the link between protection and use, and “can change attitudes and behavior of local citizens and visitors toward park environments and management practices” (Burgess 142). Interpretive programs, that involve visitors in the natural and cultural heritage of Canada’s national parks, can teach visitors to know and use parks in environmentally responsible ways. Burgess questions, “can people learn to enter national parks with the same courtesy as when they visit someone’s home, or the reverence with which they view a famous painting, or partake of the richness in a world-class museum? Perhaps then, animals would not be so inclined to disappear” (70).





## D. Exhibit Design Concerns:



The final concern that this thesis will address, is the desire to have one encompassing design vision. Frequently, museums have exhibits done by one designer and the building by another, thus producing components which do not fit together or complement each other. Most of the time, the all too common ‘black box method’ of exhibit design is employed to resolve or hide these design conflicts. Designers often must “design their exhibitions to fit within unsuitable and

unsympathetic surroundings. In some cases, the surroundings may even actively distract from the exhibition” (Hall 37). Larry Klein, in Exhibits: Planning and Design, recommends the ‘black box method’ to improve an unacceptable space. He says “paint the entire space black (or very dark) and light only the exhibits and pathways so the exhibit ‘floats’ in its indefinable cosmos” (Klein 18).

Although many recommend the ‘black box method’ of exhibit design to hide conflicts between the building and the displays, the best method is to have exhibits and a building that work together and are complementary. “The ideal setting for any exhibition must surely be in a building specifically created for it. This permits an exact detailed arrangement of the exhibition, the interior of the building and the siting of the building itself, all complementing and expressing a specific collection” (Hall 35). Klein recommends that “the ideal condition, of course, is a shelter that is integrated to the exhibit system: a place where the synthesis of site, structure, and exhibition becomes an inseparable single entity” (18).

This thesis presents a design in which the buildings and the exhibits are compatible with each other, a design created from one singular, unifying vision.

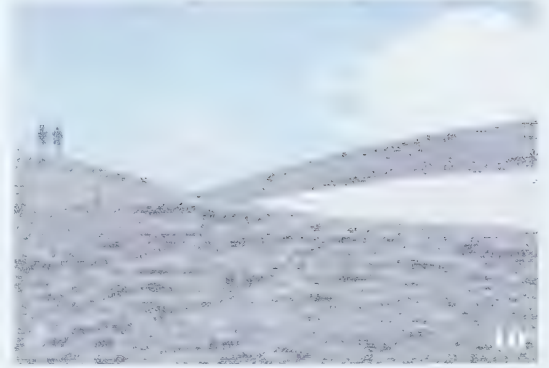


## Background

### **A. National Park System and Mandates:**

#### *National Parks Objective:*

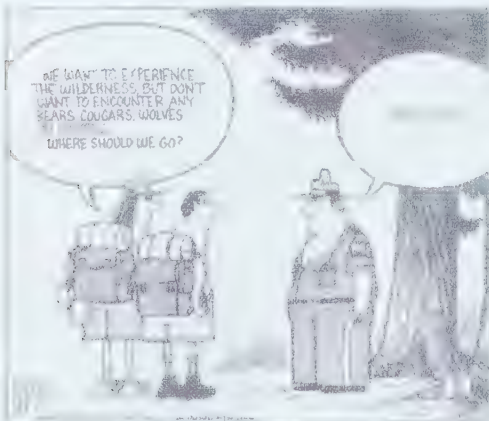
*To protect for all time representative natural areas of Canadian significance in a system of national parks, and to encourage public understanding, appreciation and enjoyment of this natural heritage so as to leave it unimpaired for future generations. (Parks Canada 1)*



Beginning with Banff National Park in 1885, the government of Canada has established a system of national parks. Yorke Edwards says that “originally, large wild parks in Canada were intended to generate tourist revenue by catering to the romantic and rich...and were not established out of concern for wilderness preservation, although that cause eventually became a worthy end in itself” (25). There are now 38 national parks representing 24 natural regions, occupying about 2.25 percent of Canada’s land mass, and they are projected to cover 3 percent of Canada’s territory. Additionally, four natural regions have areas reserved specifically for future national parks.

“Parks are established in most cases for the benefit, education, and enjoyment of current and future generations - for the long term” (Eidsvik 37). Parks Canada defines national parks as “strictly protected areas where commercial resource extraction and sport hunting are not permitted. But these are not merely nature sanctuaries preserved and locked away; they are places where people of all ages are invited to experience the outdoors and to learn about the natural environment” (2).

For many years, recreational development was allowed to occur almost without regulation in national parks. During the environmental movement, began in the 1960’s, “wilderness parks entered a new era of recognition nationally as irreplaceable treasures to be saved at all costs” (Edwards 28). Removal of developments and restoration of natural areas became a priority in many parks, particularly in Elk Island National Park. “Scientists



begun to learn about the knowledge base available in the out-of-doors. They were not alone. A wave of environmentalism swept the country in the 1960’s and 1970’s. Ordinary citizens were eager to learn, too. A vast classroom was waiting: our national parks” (Burgess 5).

During this period, to deal with the growing popularity of our national parks and to take advantage of a wonderful opportunity to educate, Parks Canada increased its commitment to interpretive programs.





“Parks existed without naturalists and an Interpretive Section for nearly three-quarters of a century, until 1958. By then, Walt Disney’s interpretations of wild animals in the films Snow White, Dumbo, and Bambi were rooted in the public mind. Even today, many people think of parks as glorified zoos” (Burgess 132). Unfortunately, the 1980’s and 90’s saw major cutbacks to interpretive programs and staff.

Burgess also describes interpretation as “reaching people with words, sound, pictures and actions and in an interesting way telling them what science knows about the world surrounding them” (Burgess 133), and “helping users gain a joyful understanding of the natural or cultural world. This can lead to the healthy concern that knowledge brings” (146). Elk Island National Park could become an interpretive model for other national parks. A Nature Museum and Retreat, along with an enhanced interpretive program would make Elk Island the leader in fulfilling the educational requirement of the National Parks’ mandate. The museum would be the connection between the public and wilderness, and would “help park visitors shed false images by serving as the human link between them and the living elements of the natural world. Interpreters could talk about butterflies with the insects right there, and add to the communication sounds, smells, and feelings” (Burgess 133).



## B. History of Elk Island National Park:

Concerns about rapidly dwindling wildlife, led to the establishment of the Elk Park wildlife preserve in 1906, renamed Elk Island National Park in 1913. Elk Island features 194 square kilometres of aspen parkland and “knob and kettle topography” (Cornish 8). It is one of four national parks that represent the Southern Boreal Plains and Plateaux region - a region that is one of continuous transition from prairie to deciduous forest to boreal forest.

In a populated area only 45 kilometres from downtown Edmonton, the park offers sanctuary to 280 species of wild creatures. Elk Island is an example of what a National Park should be: a place where man respects and cares for his environment and enjoys certain benefits in return - beauty, the experience of nature, and outdoor recreation in an unspoiled setting. It is the only National Park in Canada with a boundary fence, symbolically preventing invasion by man and protecting the abundant wildlife within. (Cornish 7)

Originally established to protect Elk, Elk Island National Park also features large herds of both Plains and Wood Bison. Due to a lack of major predators within the park, “management of wildlife numbers by the wardens is responsible for keeping the park’s ecology in balance” (Cornish 10).

Elk Island National Park was affected, perhaps more than any other national park, by the rampant development that occurred prior to the mid-1960’s. From the 1940’s to the mid-1960’s, Elk Island “served largely a locale clientele as a family-oriented park and summer playground” (Burgess 27), especially during the 1940’s, when Elk Island National Park’s administration was very pro-development: “a list of projects to be carried out, in



order of merit: opening of bungalow camps - one better class cabins, one cheaper; a trailer camp area; a restaurant and service station; additional sports facilities, to include bowling greens, horseshoe pitch, and a children's playground; and a museum" (Burgess 37). After World War II, a more professional attitude towards Canada's national parks began to emerge, but many still treated national parks as regional, not federal entities. It took government officials considerable time to change the attitudes of those in charge of Elk Island.

Eventually, the message did get through and Parks Canada endeavored to correct the mistakes of the past. The new park policy based on an awareness of the effect of human activities on ecosystems and wildlife habitats led to the removal of facilities and restoration of habitats. With these changes, came a reduction in visitation, due to the removal of facilities and the construction of new regional attractions away from the park. Because of the decrease in park facilities, an increased emphasis on interpretation was initiated in the 1950's and the 1960's. Education was needed to help visitors understand the value of protected areas, since many still considered national parks as "playgrounds" (Burgess 134). To counteract that trend, Elk Island reached out to the children with a program that emphasized the ecology and beauty of aspen parkland, and encouraged them to help those few people who were trying to preserve parks as living history.

The 1980's, saw an emphasis on research for Elk Island, along with the restorative efforts of park staff: "natural resources - fire, forests and grasslands, water and wildlife, wetlands and bogs, the systems of trails - all would now be viewed from an ecological perspective. Fading away was the park's farm image. Bison were no longer given priority" (Burgess 89).

Today, Elk Island National Park has tremendous interpretive potential, particularly with the possibility of a Nature Museum and Retreat as the 'bridge' between interpreted nature and the public. Ironically, this is not the first time a museum has been proposed for Elk Island National Park. In 1939, R. E. Harrison, a Vegreville Liberal, wrote Ottawa regarding a museum. He received this reply: "no consideration ever given to establishment of a museum in Elk Island. Primary purpose of the park is for conservation of wildlife...and all other natural features are preserved...the whole area becomes a natural museum" (Burgess 38).

Although, that was the correct decision five decades ago, this proposal and the previous one are very different. The earlier museum was to be about Ukrainian pioneers and aboriginals - this proposal is about the importance of a holistic view of nature, and about the importance of saving wilderness. The previous proposal was a tourist facility without an ecological message, to bring tourist dollars into Elk Island National Park without any regard for the integrity of the park. This proposal is about teaching visitors to respect that 'integrity', in Elk Island National Park, and in *all* wilderness areas.

Finally, there are two amenities that are of note, and that have a direct relationship to this proposal - one that has been removed and one that still exists. Between 1955 - 1970, Elk Island National Park was home to a Canadian Youth Hostel, and in the 1980's a small interpretive centre was opened. This proposal rationalizes these two facilities together by proposing a retreat or hostel-type component, in combination with an integrated, more comprehensive interpretive centre.





The following is a list of other existing man-made amenities within Elk Island National Park, most of which are located in the Astotin Lake area:

1. Eleven different hiking trails
2. Information Centre
3. Administration Office and Outbuildings
4. Sandy Beach Campground at Astotin Lake (tents and trailers with a sani-station)
5. Oster Lake Backcountry Group Tenting Area.
6. Tawayik Lake Picnic Area
7. Numerous toilet facilities/cooking shelters/parking areas
8. Golf Course and Food Services
9. Astotin Interpretive Centre and Theatre
10. Boat Launch at Astotin Lake
11. Sandy Beach Picnic Areas
12. Ukrainian Pioneer Home



## Research and Discussion



### **A. Similar Projects and Influences:**

Parks Canada has an existing interpretive program at Elk Island National Park, and has significant interpretive centres at many other locations. Some of the more notable are: the Lake Louise Visitor Centre in Banff National Park, the Columbia Icefields Centre in Jasper National Park, and the Wickaninnish Centre in Pacific Rim National Park. Within Edmonton's city limits, the

John Janzen Nature Centre provides nature-based exhibits and education to families and school-aged children, albeit, with limited space and exhibits, and located within an urban setting. The Bennett Environmental Centre delivers excellent programs to school groups, particularly those that involve environmental issues such as recycling.

**Other projects both national and international used as inspiration for this proposal:**

#### **The Fluvarium**

Located near St. John's, Newfoundland, the Fluvarium is the only one of its kind in North America. It houses a collection of interactive exhibits and displays, each relating to various freshwater habitats. Its main attraction is the diversion of Nagle's Hill Brook, a tributary of the Rennies River, so that it flows past underwater viewing windows. 'Fluvarium' literally means 'windows on a stream'. The Fluvarium serves to educate the public about freshwater ecology and the stream enhancement and restoration of the Rennies River system.



#### **The Canadian Childrens Museum**



The Canadian Childrens Museum occupies about 2300 square meters (25,000 square feet) within the Canadian Museum of Civilization in Hull, Quebec. It is geared towards children up to age 14 and their families. Key to this museum, is the extraordinary level of interactivity - a strong emphasis is placed on discovery, imagination and role playing. The museum's logo features a 'handprint', which is very appropriate considering the amount of hands-on activities available to visitors. Virtually all exhibits are meant to be touched and handled.





## **The National Museum of Science and Technology**

Another large museum located in the Ottawa area, the National Museum of Science and Technology features a large collection of exhibits and displays based on science and technology. Many exhibits are interactive; all the exhibits are biased towards a rather didactic, scientific viewpoint. This scientific-bias results in most exhibits not showing the 'entire picture' - they show 'brains' or 'brawn', but not 'beauty'.



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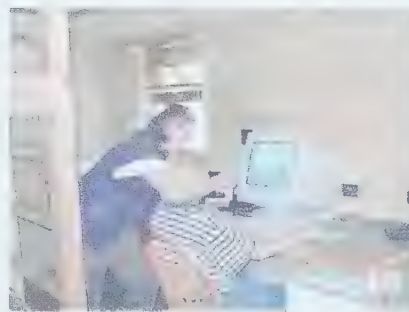
## **The Leighton Studios at The Banff Centre**



Situated in Banff National Park, the Leighton Studios at The Banff Centre offers project-based residencies or retreats for writers, composers and artists. It features eight different studios, each designed by a prominent Canadian architect. Of particular interest, is the Henriquez Studio. It is an old fishing boat, converted to a studio space, and symbolically 'beached' on the mountainside.

## **The Canadian Ecology Centre**

This project has recently been constructed in Samuel de Champlain Provincial Park in Ontario. It features nineteen duplex cabins, and soon, will see the construction of a common pavilion or centre. At first glance, this project would seem very akin to this museum proposal, yet, upon further investigation, it is obvious that this project is an ecology centre in name only. Instead, it is closer to a resort experience. It has funding from corporate sources, and therefore, inevitably a very different attitude towards 'ecology'. Under the guise of an ecology centre, this project features 'all the comforts of home in the middle of the forest', including personal computers with internet access in every cabin. The attitude of this project, with its emphasis on industry's view of a 'healthy forest', and the importance of technology, undoubtedly yields a somewhat industry-biased ecological viewpoint.



## **Museum of New Zealand Te Papa Tongarewa:**



The new Te Papa Museum in Wellington, New Zealand is a very innovative museum, both in terms of its building, and its exhibit layout and design. It has 10,000 square metres of exhibition space and is one of the largest recent exhibition design projects. Heumann, speaking about the impact of Te Papa on



the world of exhibit design states: “I am convinced that this project has profound implications in the ways in which we in the museum business will do our work in the future” (76).

One of the major design decisions for Te Papa was its rejection of the ‘black-box method’ of exhibit design. Bossley says that “it became obvious that the desire to merge the curatorial departments would not best be served by four discrete ‘black-box’ galleries...” (22). Te Papa’s exhibits are designed to be particularly graphic and eye-catching. They break with the old pedantic, traditional methods of exhibit design, by treating the exhibits more like art objects. “While many of the world’s museums still debate the merits of objective reporting, these exhibits are to be enjoyed, contemplated, pondered over, learned from and argued with - but certainly not passively received” (Heumann 78).



Remarking on the success of Te Papa’s exhibits, Parkinson reports:

Te Papa’s exhibitions tell stories. The story is told as visitors move through an exhibition space; the task of exhibition design is to move people enjoyably, almost subconsciously, through the story. Across the museum and within every exhibition, the design intentionally modulates the visitor experience with high points, attractors, and quiet moments. Objects and graphics, sound and lighting, are all used to move and lure the visitor. Exhibition entrances are particularly designed to attract visitors and pull them into the space and tend to be quite flamboyant. On the other hand, a building filled with such exuberance would quickly overload visitors; across the museum, hierarchies were established to keep various parts of the message in perspective. (62)

While the proposed Nature Museum and Retreat looks to various design sources for inspiration, it also considers the work of modern exhibit designers such as Charles and Ray Eames, who were perhaps the most influential exhibit designers of the 20th century. This design looks to them for guidance, particularly regarding their artistic treatment of scientific topics in their multimedia works. It is evident that Ray and Charles Eames considered scientific undertakings, and all human endeavors, as originating from an artistic vision” (123). With respect to this connection between art and science, Lightman, in A Sense of the Mysterious comments:

For the Eameses, the artist was the playful creator, the conceiver, the designer, the visionary. Art, in this sense, comes before everything else and lies at the center of every noble human achievement. It is well known that many of the great scientists have been guided by aesthetic criteria and vision. (124)





Commenting about the process of discovery, Lightman remarks:

Out of our minds we create, we imagine, we see. We experience the known and the unknown...if one could somehow distill into a single word the legacy of Charles and Ray Eames for science education, and perhaps for all their endeavors, it might be imagination. Seeing with the mind. In the human imagination, our art and our science come together. (125)

This approach to imagination also summarizes the basic approach to the design of this Nature Museum and Retreat for Elk Island National Park - imagination through a synthesis of art and science.

## **B. Discussions with Target Audience:**

Learning, especially about nature, never stops, so the actual target audience for this museum proposal could be considered 'children of all ages'. Yet, the critical age group to convey the preservation message to, are children of preschool and elementary school age (from 4 to 12 years of age). David Suzuki relates, "that these early years are when the ground is set for a lasting relationship with nature; bonds that may be necessary for our own survival, as well as the other creatures of the Earth." These are the ages that children are the most impressionable, and can learn to grasp and understand simple concepts. It is also the time when they are the most imaginative.

Upon commencement of this thesis, the first research undertaken was to talk to a representative group of the critical target audience. After a presentation about museum design, students in grades 1, 2, and 3 at Westglen School in Edmonton were asked to express what they thought a nature museum should be. Included with this document are selected examples of their responses (see figures 21, 36, 37, and 38 ). Students in the earlier grades were intentionally chosen because their imaginations are unrestrained.

Many children, who had experienced museums, had already determined what they should be. They presented predictable ideas - individual specimens enclosed in individual spaces. The more imaginative, less inhibited children designed museums that showed the entire environment - an environment in which children were welcomed and encouraged to interact. It was almost as if they subconsciously explained the difference between collections and connections, between separation and unity, between a species-based approach and one that attends to the entire ecosystem.

Imagination, and its encouragement, is one of the primary objectives of the Nature Museum and Retreat for Elk Island National Park. Visitors will see the world of nature afresh, reliving the excitement of their youthful discoveries. Frank Oppenheimer, the director of the very influential science museum, the Exploratorium, discusses the need to have an exact target audience:





There are two things misleading about the statement ‘you have to decide who your audience is’. In the first place it is possible to make many, if not most, of the exhibits so that they can each individually be appreciated and enjoyed on a variety of levels. Secondly, it is ridiculous to think that every visitor should be able to appreciate or enjoy every exhibit in the museum.

Over and over again I have been lectured at by exhibit designers with the statement, ‘you have to decide who your audience will be...’ But as far as we can determine there is no age limit, no training limit, nor any cultural limit to the range of people who use and enjoy the place. Preschool groups and old-folks-home groups come and come back. (Klein 210)

The intent of this museum proposal is to preserve wonder, not only in young visitors, but also in their older brothers and sisters, their parents, and their grandparents. Young children have much to teach, or remind, the older generations about the significance of wonder. Visitors should experience feelings similar to those which touched Alice’s older sister at the end of Alice’s Adventures in Wonderland:

Lastly, she pictured to herself how this same little sister of hers would, in the after-time, be herself a grown woman; and how she would keep, through all her riper years, the simple and loving heart of her childhood; and how she would gather about her other little children, and make their eyes bright and eager with many a strange tale, perhaps even with the dream of Wonderland of long ago; and how she would feel with all their simple sorrows, and find a pleasure in all their simple joys, remembering her own child-life, and the happy summer days.  
(Carroll 164)

The key to experiencing nature anew is a return to the imagination and reverie of childhood - even Alice could not enter Wonderland until she was the proper size - she had to be smaller.

### C. Perception and Discovery (How Children Learn):



*To see a world in a grain of sand  
and heaven in a wildflower,  
hold infinity in the palm of your hand  
and eternity in an hour.*

- William Blake (from Auguries of Innocence)  
(Doczi 5)



22

Most adults have forgotten about how ‘magical’ the world was when they were children. Routine and cynicism has crept in, becoming the norm and leading to prejudice. As adults, many of us think we have the world all figured out - yet, we couldn’t be further from the truth. Holt states that children “see the world as a whole, mysterious perhaps, but a whole nonetheless. They do not divide it up into airtight little categories, as we adults tend to do” (232). Partly to blame for this profound transformation is our



educational system. David Suzuki explains, “in schools, children are instructed about the outside world within the confines of the classroom. Reality is reduced and dissected into smaller and smaller parts.”

What many adults have misplaced, or overlooked, is their youthful curiosity, their sense of wonder. Holt says that a child’s “curiosity grows by what it feeds on. Our task is to keep it well supplied with food” (233). This ‘food’ should not come with restrictions or be dieted. It should be a veritable smorgasbord of ideas, thoughts, connections, and experiences, and it should never be force-fed.

What teachers and learners need to know is what we have known for some time: first, that vivid, vital, pleasurable experiences are the easiest to remember, and secondly, that memory works best when unforced...the schools cling more and more stubbornly to their mistaken idea that education and teaching are industrial processes, to be designed and planned from above in the minutest detail and then imposed on passive teachers and their even more passive students. (Holt xiii)

Consequently, it is recommended that “exhibit designers should try to appeal to both the head and the heart, and generate some kind of activity or exchange on the part of the visitor”(Klein 19).

“A child does not need to be told what wheels are and what they are for, in order to know. He can figure it out for himself, in his own way, in his own good time” (Holt 290). In his book, How Children Learn, Holt places the blame on the school system’s choice of priorities. He declares that passively ‘learning by rote’ results in many children becoming disinterested in learning by the time they are allowed to be more interactive:

One of the fundamental ideas behind most of what we do in school is that children should and must spend many years memorizing a lot of dull facts before they can begin to do interesting things with them. This is a foolish way to go about things, and it doesn’t work. (Holt 208)



Art is a child’s way of demonstrating what he or she is learning about life. Children are, by nature, artists, yet all too often many school systems determine that creative forms of expression are only forms of ‘play’ - not serious learning like math or science. Eventually, the children begin to feel that art is not worthwhile. “But there are possibilities in art that they can hardly have dreamed of. They ought to be able to see more of those possibilities. They should at least be exposed to the idea that art can be not just a diversion, but a very powerful way of getting in touch with and expressing reality” (Holt 199).

This museum proposal addresses the importance of art and creativity to learning. The exhibits are designed to spark a child’s imagination, because art is not only about seeing, it is also about thinking. “Art can exercise the brain, as well as the eye and hand” (Holt 203).





#### D. The Function of Art / The Beauty of Science:



Creativity is paramount to the understanding of science and nature. Albert Einstein once said that “imagination is more important than knowledge”. “The artistic vision is a powerful force in science education as well as in scientific research” (Lightman 124). Artists have the ability to understand nature because they are trained to see, and they, quite possibly, have the most to contribute when it comes to enlightening others. Lightman submits that “to portray the idea for the nonscientist it is not necessary to dilute, to simplify, or to disguise in uncertain metaphors. What it takes is an artistic vision” (119, 120).

Science and art germinate from the same ‘seed’, both originate from the imagination, but there are inherent differences between them - science tends to dissect to understand, art tends to combine. While science is interested in the details, art comprehends ‘the whole picture’. This museum presents concepts on a more artistic level, because “nature cannot be accurately represented through science” (Maser 268), as Frank Oppenheimer, discussing the Exploratorium asserts:

An important general consideration of the Exploratorium stems from the central values we place on art. Many museums involve artists to help with the appearance and the graphics of their exhibitry. We have used artists in a parallel capacity to that of science teachers. Each contributes exhibits that deal with roughly the same domains of nature.

Art is included, not just to make things pretty, although it often does so, but primarily because artists make different kinds of discoveries about nature than do physicists or biologists. They also rely on a different basis for decision-making while creating their exhibits. But both artists and scientists help us notice and appreciate things in nature that we had learned to ignore or had never been taught to see. Both art and science are needed to fully understand nature and its effects on people. (Klein 210)

How do we go from seeing, to an understanding of science and nature? This museum proposal’s chief concern is generating an appreciation for nature, because one will never understand something that isn’t appreciated. With appreciation, will come a deeper understanding.





## E. Educational Component / School Curriculums:

*Americans are more often taught to identify types of cars than types of birds: we can identify one thousand corporate logos but less than ten native plants. (Hawken 214)*

Although some elements of the Edmonton Public School's elementary science curriculum do relate to learning about nature, the amount deserves to be increased. Presently, there seems to be a bias towards studies that involve technology or engineering. More time should be allotted to the understanding of the natural world, to encourage an ecology-based attitude. Rowe defines 'ecology' as being "derived from the Greek word oikos, which means 'home. Therefore, ecology literally means 'the knowledge of home', or 'home-wisdom' " (229).



Very few of the school curriculum components adequately represent the 'complete picture', rather, it is separated into smaller, seemingly unrelated topics such as 'Bugs and Crawlers'. Sue Greig in Earth: Education As If The Planet Really Mattered suggests that "a new ethic, embracing plants and animals as well as people is required for human societies to live in harmony with the natural world on which they depend for survival and well being... The long term task of environmental education is to foster or reinforce attitudes and behavior compatible with this new ethic. (25)

Global and regional environmental problems are a direct effect of apathy, ignorance, and the lack of environmental instruction in schools. Greig suggests that children should be introduced to an environmental, ecosystem-based, holistic education between the ages of 7 to 12. "These five years are unique. They come before too many stereotypic attitudes dominate the child's view of the world, and are concurrent with the period sufficiently advanced to accept a diversity of viewpoints" (Greig 62). Life patterns and attitudes develop early in childhood and become very difficult to alter towards the teenage years. It is important to reach children early, and aid them to develop responsibly, without terrifying them about the world's ills. "Teachers have a responsibility to ensure that students are not left with a sense of helplessness and hopelessness in the face of global problems. Ideas for action, and the practice of action skills, are crucial components of any effective programme" (Greig 68).

There is still much apathy and ignorance regarding the natural environment, but education is improving attitudes with respect to the preservation of nature.





## F. Retreat Component:



A major component of this museum proposal is a series of very simple residential elements that permit families to stay overnight and become involved in expanded and more intensive interpretive programs. The retreat component would be used to enhance the delivery of the preservation 'message'. It would also be used by researchers, or groups of artists who later would exhibit their works in the museum, thus expressing the beauty and wonder of the area. Artists have much to teach us about the value of preserving natural wonder:

Our history, our painting, our literature, along with our music and film, are all fundamental elements of Canadian culture and identity. All have been deeply influenced and distinguished by the wilderness. (Littlejohn 19)

The retreat component of this museum allows wilderness to be more accessible to families and encourages artists to present their personal observations and visions of wilderness, reinforcing the importance of preservation.

## G. Summary / Importance of Ecosystems:

Wilderness in Canada is threatened and opportunities to encounter wilderness are being diminished. Nature requires protection on an ecosystem by ecosystem basis, rather than the present species by species basis. The proposed Nature Museum and Retreat for Elk Island National Park would be instrumental in communicating this very significant information.

Legions of people have buried their heads in the 'proverbial sand'. They are insulated by the 'virtual' world of technology and won't comprehend or consider the consequences of losing entire natural systems. Many tend to make prejudiced judgments about which animals or plants merit salvation - they would actively protect the Koala because it is 'so cute', but neglect the eucalyptus trees because they smell bad. Nature does not work this way - people need to understand that all life on Earth is interconnected. As Drengson says, "all that each of us is, is shared by everything else that is" (22). The relatively apathetic public must learn to see the 'forest beyond the trees', for "the wild will only be saved if we learn to love it" (Searle 182). Society has not yet appreciated the environments in which we live as living spaces, or essential systems that sustain us. Yet when these living spaces are threatened, so are we. "Where wildlife habitats are destroyed, the individuals that occupied them are no more. There is no elsewhere" (McTaggart-Cowan 262).



The proposed Nature Museum and Retreat for Elk Island National Park acts as the hub for intensive interpretive programs which emphasize the relationships between species and natural systems. These programs would teach visitors how to 'walk with nature' and advance the importance of wilderness preservation and the preservation of wonder.



## Design and Discussion

### **A. Selection of the Site:**



A number of criteria were considered with the site selection for this Nature Museum and Retreat proposal. Firstly, the museum had to be located in close proximity to an urban population large enough to support the project, thus making it financially viable. Secondly, the museum needed to be located in a relatively unspoiled natural setting. Lastly, it had to be located where it would best be able to present its message of preservation. After considering these requirements, it was determined that Elk Island National Park would be the preferred location.

Elk Island National Park is an extraordinary natural resource which, although it is very close to Edmonton, is extremely underutilized. Visitorship has declined considerably in recent years and the proposed museum would do much to revive interest in the park. It would make the park a 'destination', rather than a 'drive-through' on the way to Jasper and Banff. Elk Island offers the perfect opportunity for a nature museum - a museum that would provide for true interaction with nature and actively promote environmental messages.

After many site visits, it was determined that Tawayik Lake, almost centrally located within the park, would be an ideal setting for the museum and retreat (see figure 30). Tawayik Lake offers a somewhat isolated location for the museum and retreat, and has an existing roadway, so further disturbances to the surrounding ecosystems would be limited. Tawayik Lake is also close to many hiking trails, has cross-country skiing in the winter, and features a wide variety of waterfowl and different types of ecosystems.

The designated site for the Nature Museum and Retreat is approximately 500 to 750 metres up the Oster Lake Road from the Tawayik Lake Picnic Area (see figure 39). This location, situates the project far enough from the lake to ensure as minimal affect on the lake's ecosystem as possible, while still providing a view of the lake to the south (see figure 31). The buildings are orientated to take full advantage of this view. In order to further protect the surrounding ecosystems, it is recommended that the required parking area be located at the existing Information Centre, and that the museum have only a drop-off zone located at the front entry. Visitors would be transported to the museum by shuttle buses.





## B. Concepts and Symbolism:



Conceptually and symbolically, the Nature Museum and Retreat is constructed of forms that serve to semantically reinforce the message which the project is designed to convey: the importance of the preservation of ecosystems. To do this, the design employs the image of the 'ark' and the 'dove'. The museum takes the shape of the 'dove' for the configuration of its galleries, and the central atrium features a structure designed to symbolize an 'ark' under construction. This structure is also reminiscent of natural forms such as seed pods, caddis fly larva 'homes', or cocoons.

The outbuildings are placed around a large, sweeping circle which, in plan, resembles a cross-section through an eye (see figure 40). The sleeping units adopt the canoe-shaped leaves of the Labrador Tea plant as inspiration for their form, and their position around the circle suggests aboriginal imagery: the entire project, in plan, resembles a drum with the sleeping units as the decorative feathers. The layout also recalls the native legend of the sun being carried by a raven - the museum's 'bird form' combines with the circle as the sun, and the sleeping units create the sun's rays.

This symbolism is intended to subliminally convey and reinforce the message behind this project, and to support the project's artistic nature regarding what could be considered a scientifically-based subject. Hall advises that, "the mechanics of design should never be obvious, the designer being no more noticeable than the good pianist accompanying the soloist" (11). The scale of the project ensures that these visual allegories remain subtle, even subliminal, and tend to charge the visitors' experiences with unexplained mysteries or wonderful surprises. Hall recommends that the combination of building and exhibits should result in a "thesis, a statement of some sort, much more than merely a collection of objects" (45). The entire design of this museum and its accompanying outbuildings could be considered a visual thesis statement signifying the importance of natural preservation. To this end, it is essential that this 'statement' operates on both conscious and subliminal levels.

## C. Two Components (Buildings and Exhibits):

Margaret Hall, in her book, On Display: A Design Grammar for Museum Exhibitions, advises that "the architecture should be as anonymous and colourless as possible, the style and colour coming from the exhibition itself" (39). This recommendation is no longer valid, as is evident by the Te Papa Tongarewa Museum in New Zealand. Paramount to the success of today's museums is the requirement that the building and the exhibits must complement and enhance each other. The 'black box method' of museum design is **not** relevant with this project. Rather, this design puts forward a unique and singular vision for both building and exhibits.





## Outbuildings

This facility design includes a number of smaller outbuildings: sleeping units and a common building (see figure 41). Both building types are insulated, wood-frame construction with stained wood siding and prefinished metal roofing. The design of the six, duplex sleeping units (approximately 30 square metres/side) provides only a sitting area, and sleeping areas (bedroom and loft). They do not include kitchens or washroom/shower facilities; these are located in the common building. Duplex units, by nature, usually result in quieter ‘tenants’. To interest only visitors who do not need or expect a ‘resort experience’, the units are intentionally kept basic.

The common building (approximately 150 square metres) incorporates a sitting/meeting area, washrooms and shower facilities, and two full kitchens to accommodate situations when more than one group is visiting at the same time. It also includes two small staff residences with Murphy beds and lofts for the interpretive program staff. The sitting/meeting area includes a tree-form timber structure and a fireplace.

## Museum

The museum has been arranged as a split-level to take advantage of the site grading. From the Entry Lobby, one flight of stairs leads up to the Special Exhibits Gallery, while another flight of stairs leads down to the other galleries (see figures 42 and 43). The museum is approximately 3200 square metres in area, with about 1300 square metres of dedicated gallery or exhibit space. The Reynolds’ Alberta Museum in Wetaskiwin, Alberta was employed as a rough guide to determine space allocations.

All private areas have been grouped together and physically separated from areas of public access. The project includes elements that are typically associated with museums of similar stature and scale: Gift Shop, Resource Room, Admissions Area, Administration Area, Cafeteria with Kitchen and Server, Theatre with Audiovisual Room, Discovery Room(s), and Service and Loading Areas. There are approximately 300 square metres of Prep Room/Museum Storage. The Cafeteria includes seating for up to 120 people, and a central, conical skylight. Beneath this skylight, is a tree-form element, constructed from timbers on a painted steel column. The Theatre, which seats 150, is connected to the Special Exhibits Gallery, permitting them to be used together for special functional requirements. Handicap access to all levels is possible by elevators in the public Lobby, and the staff-only freight elevator in the Service Area.

The museum’s construction is a combination of painted steel, glulam beams, timber and wood. Exterior materials are natural with the majority being stained wood siding and exposed concrete (see figure 44). Also, wherever possible, to be ecologically responsible, the museum will employ ‘green’ building practices and construction.

The expansive southern wall of the galleries incorporates a painted graphic that recalls aboriginal pictographs, but in this case, would be a composition of childrens’ art, selected through a public competition, featuring depictions of Elk Island’s wildlife. It also includes large ‘shutter-doors’ over screened openings, so that on pleasant days, the sounds and smells of wilderness can invade the galleries. Also, the south side of the museum is bermed



to fit into and relate to the natural topography. All surrounding landscaping is natural and indigenous.

The building's design encourages the use of natural light in many areas, particularly in the central Atrium area, which also features the lattice-like, timber 'ark'. Skylights, and much of the glazing, are constructed using the Kalwall panel system. It is translucent, produces a 'look' and a light similar to Japanese shoji screens, and provides an RSI 2.1 insulated wall value. This product is ideal because it diffuses light, reduces glare, eliminates the view of the sky, and is visible to birds.

## **Exhibits**

The exhibit galleries are divided into four well-defined areas, each of which is assigned a season: winter, spring, summer, and autumn. All exhibits are designed to portray aspects of various ecosystems as they go through the seasonal cycle. Movement through the galleries is directed by this cycle, so that visitors can follow the seasonal order no matter which gallery they begin with. "Finding the right ending for an exhibition involves a clear policy decision in the planning stage: what is the visitor expected to feel or do on leaving?" (Hall 134). In this museum proposal, the ending is the same as the beginning in order to emphasize the cycle of life and seasons that are so important to ecosystems.

Many of the exhibits within the galleries are over-scaled to make adult visitors feel 'small' again. Animals chosen for these over-scaled exhibits are considered by many to be either gruesome or insignificant. They are selected to convey the important roles these animals perform in ecosystems. Some exhibits are animated, and most are interactive, yet there is a definite movement away from current technological exhibit techniques. Although the amount of electronic wizardry present in people's lives will lead to high expectations of this sort of interaction, this design delivers reality rather than 'virtual reality'. The amount of audiovisual 'toys' will be minimal, instead themes are presented in a low-tech, experiential way.

The exhibits are addressed more graphically or artistically as opposed to the standard more traditional pedantic or textual approach. Words are sometimes an awkward and vague form of communication, and are exceptionally slow. Emphasis is placed on exploration and discovery, and asking questions, rather than supplying answers to programmed questions. This museum will employ realistic models, as the usual method of displaying animals through specimens and/or taxidermy is not appropriate for a museum located within a national park.

## **D. Materials and Systems:**

All exhibits will be fabricated from durable and, wherever possible, natural materials. Some exhibits are standardized for seasonal flexibility requirements, economy of production, and design unity. The exhibits will be dramatically enhanced by a specialized, directional lighting track system. Atmosphere will be created through the use of patterned and animated gobls. To supplement the distinct atmospheres devised for each gallery, tape loops of sounds from nature appropriate to each season are employed.





## E. Thematic Developments (Selection of Display Topics):



importance of wit, imagination, and creativity through the use of art and experience. Paramount to the exhibit design is scale. Holt writes in How Children Learn that “children are very interested, indeed fascinated, by the idea of scale. That things can be made the same shape, that is, to look the same, but some of them bigger than others, is a great mystery and wonder to them” (207). Also important to the exhibits is the ‘notion of surprise’ - this is accomplished not only through the scale, but by the animation of some exhibits. This museum will endeavor to not build any ‘barriers’ to children and therefore, many of the over-scaled models are designed to permit children to touch and climb on.

## F. Ordering and Layout of Exhibits:

Exhibits make use of the entire volume provided by the building, from floor to ceiling. The exhibit layout is designed to accommodate groups of school children, and it is arranged to ‘cycle’ visitors back to the beginning. Exhibit topics are located next to related topics to create narrative flow. All individual topics are presented not only with respect specific details, yet with an emphasis on relationships within ecosystems.

## G. Features and Functions / Individual Exhibits:

Standardized units, which appear in all galleries include: barrier and panel stands (see figure 45), A/V stand-alone units (see figure 46), and typical display cases (see figure 47). All are transportable and constructed using industry-standard cabinet construction methods from plywood, sheet metal, Plexiglas, and painted steel. All other exhibits are unique and are described in the following ‘walk-through’:

### Entrance Lobby/Special Exhibits Area

#### 1. Western Garter Snake

To surprise and prepare visitors for what they will experience in the main galleries, an over-scaled snake winds its way through the central atrium’s truss work, and appears above the front entrance. Its tongue is animated, darting in and out of its mouth. This exhibit is constructed with a fiberglass ‘skin’ wrapped around a metal armature.

#### 2. Ladybird Beetle

Outside of the Theatre entrance, and visible from the Lobby, is an over-scaled ‘ladybug’. It is not animated, as it is designed to be climbable, and is fabricated from fiberglass surrounding a metal framework. For additional support, the interior is filled with a high-density, expanded foam.



## **Foyer**

### **3. “Wonder Wall” Audiovisual Presentation**

This component introduces the exhibits as visitors enter the galleries, and provides a concluding message as they depart. It features an entire wall of ganged A/V monitors that display images of nature’s splendor and childrens’ art combined with relevant quotations. All elements will be randomly generated by a computer, resulting in an infinite number of combinations.

## **Winter Gallery**

### **4. Weasel (in winter)**

Some animals native to Elk Island rely on camouflage during the winter. As visitors enter the Winter Gallery, they encounter this exhibit. It is an over-scaled exhibit that is meant to be climbed on, and is not animated. It is fabricated using a fiberglass ‘skin’ over injected, high-density, expanded foam around a metal armature.

### **5. Black-billed Magpie**

Suspended from the roof structure above the Winter Gallery, is an over-scaled Black-billed Magpie. It is not animated and is meant as a lead-in to an interpretive discussion about winter residents, and ‘bad reputations’. It is fabricated similar to the snake, with a fiberglass ‘skin’ surrounding a metal armature.

### **6. Animal Defenses**

Elk Island National Park is home to creatures such as skunks or porcupines, which have amazing ways to defend themselves. This topic is discussed with a series of graphic panels in combination with an A/V stand-alone unit.

### **7. Camouflage**

Intended to work in conjunction with the Weasel exhibit, this display features a series of graphic panels and an A/V stand-alone unit which will present ways in which animals camouflage themselves (e.g. Varying Hare in winter versus summer).

### **8. Hibernation**

A series of graphic panels and exhibits discuss animals that hibernate during Alberta’s harsh winters.

### **9. Wildlife and Habitat Management**

Elk Island National Park depends on wildlife and habitat management possibly more than any other national park. A series of graphic panels and a computer game will deal with management concerns regarding wildlife and habitat management that are particular to Elk Island National Park.



## 10. Animal Tracks

This is a large exhibit, somewhat like a diorama, featuring full-scale representations of many of Elk Island's winter animals and their tracks. It also features underground cutaways showing animals that live beneath the layer of snow and those that hibernate in dens. Because the life-size replicas are placed next to each other, it allows for easy comparisons.

## 11. Animal Oddities case

This standardized case unit showcases interesting characteristics and habits of particular animals and plants. This 'mini-display' is to be changed and rotated periodically.

## 12. Seasonal Change in Ecosystems

This standardized A/V stand-alone discusses the seasonal changes in ecosystems. This unit presents the 'Winter' segment of a four-part series.

## Spring Gallery

## 13. Wood Frog

Proceeding into the Spring Gallery, visitors 'startle' an enormous Wood Frog and it leaps. Built using the same fiberglass methods as other exhibits, this over-scaled exhibit features a frog captured in mid-jump. It is not animated, is semi-climbable, and is used as an entry point to discussions about hibernation, reproduction, and indicator species.

## 14. Banana Slug

Another over-scaled, fiberglass exhibit, the Banana Slug, is meant to be climbed and 'slithered' on. It is not animated, and is utilized as a lead-in to an interpretive discussion about 'bad reputations'.

## 15. Bumblebee

'Flying' above the slug, an over-scaled Bumblebee is suspended. This exhibit is not animated, and is also fabricated in fiberglass around a metal frame. It is to be used for interpretive discussions about the 'birds and the bees' (pollination).

## 16. Caddis Fly Larva

Many animals build unique 'homes'. Interpreters use this exhibit to talk about nests and 'homes'. Another over-scaled, fiberglass model, it is suspended from above, and features an animated caddis fly larva that periodically appears from within its home of sticks and reeds.





## **17. Birds and the Bees**

A series of graphic panels and an A/V stand-alone unit communicates a ‘family-friendly’ presentation regarding natural reproduction among various species within Elk Island’s ecosystems.

## **18. Big and Small**

This set of graphic panels, in conjunction with animated, over-scaled models expresses the importance to ecosystems of the tiny creatures found in ponds (e.g. daphnia, cyclops and rotifers).

## **19. Nests and Homes**

In addition to the over-scaled Caddis Fly Larva display, this exhibit consists of a series of graphic panels and an A/V stand-alone or a computer game (match the home to the animal). It will present information and graphics with respect to interesting nests and ‘homes’ of the park’s wildlife.

## **20. Bad Reputations**

Graphic panels and an A/V stand-alone unit discuss the ‘bad reputations’ that some creatures have and their importance to the health of an ecosystem - the roles that they play in natural systems (e.g. magpies and carrion).

## **21. Beaver Pond Ecosystem**

Another diorama-like exhibit, the Beaver Pond Ecosystem (Spring display) features full scale models of a beaver pond and its inhabitants just after spring thaw. It also includes graphic panels, and is a complement to the Beaver Pond Ecosystem (Autumn display) at the other end of the museum.

## **22. Animal Oddities case**

This standardized case unit showcases interesting characteristics and habits of particular animals and plants. This ‘mini-display’ is to be changed and rotated periodically.

## **23. Seasonal Change in Ecosystems**

This standardized A/V stand-alone discusses the seasonal changes in ecosystems. This unit presents the ‘Spring’ segment of a four-part series.

## **Atrium**

### **24. Terrarium**

At one end of the atrium, a large terrarium houses a living example of a wetlands ecosystem. Graphic panels explain the various specimens.



## **25. Barn Swallow and Mayfly**

Hanging above the terrarium, an over-scaled, fiberglass replica of a Barn Swallow pursues a Mayfly. This exhibit is not animated.

## **26. Metamorphosis - Tiger Swallowtail**

Displaying the four stages of a Tiger Swallowtail's complete metamorphosis, this over-scaled, fiberglass model occupies a prominent location. Three of the stages are animated: the caterpillar moves, the chrysalis 'wiggles' and the adult butterfly occasionally flaps its wings. Included with this exhibit are explanatory graphic panels.

## **27. Animal Oddities cases**

These standardized case units showcase interesting characteristics and habits of particular animals and plants. These 'mini-displays' are to be changed and rotated periodically.

## **Summer Gallery**

### **28. Living Machines**

Modern technology has appropriated many ideas from nature. This exhibit uses graphic panels and an A/V stand-alone unit to compare and contrast some of Elk Island's creatures to common machines (e.g. mosquito as a jack hammer).

### **29. Mosquito**

Very noticeable to visitors entering the Summer Gallery, is the 'world's largest mosquito'. It is an over-scaled, fiberglass exhibit, that is not animated, but is semi-climbable and can be walked under. The Mosquito is meant as the point of discovery for an interpretive discussion about the 'living machines' display.

### **30. Tiger Salamander**

Children are encouraged to climb and 'slither' on this over-scaled creature. It is not animated and is constructed of fiberglass and foam surrounding a metal structure. This exhibit is to be used to begin an interpretive discussion about indicator species.

### **31. Dragonfly**

Suspended above the salamander is an enormous, fiberglass Dragonfly that is not animated. Visitors will come to understand that dragonflies are 'helpful' to humans, and take part in discussions about flying machines.

### **32. Adaptations**

This display consists of a series of graphic panels, interactive models, and a computer game comparing the diverse adaptations that animals have evolved to perform specific natural tasks. (e.g. woodpecker's bill and tongue or hummingbird's bill and tongue).





### **33. Animal Societies**

Many animals, especially insects, have developed complex societies. These are considered with a series of graphic panels and an A/V stand-alone unit that speaks of the fascinating social aspects of nature's creatures (e.g. ants, bees, wasps).

### **34. Beehive**

This living exhibit houses an actual functioning beehive. It would be contained in a specialized glass case and would require an exterior access tube for the bees. Interpreters will use this element to discuss animal societies.

### **35. Frog Metamorphosis**

This exhibit features a series of graphic panels in conjunction with relief models that depict the metamorphosis of a Wood Frog from egg to tadpole to frog.

### **36. Spider**

This over-scaled fiberglass and metal replica is not animated. Suspended by 'silk' attached to the roof structure, this exhibit portrays a creature that fits into discussions about adaptations and living machines.

### **37. Animal Oddities case**

This standardized case unit showcases interesting characteristics and habits of particular animals and plants. This 'mini-display' is to be changed and rotated periodically.

### **38. Seasonal Change in Ecosystems**

This standardized A/V stand-alone discusses the seasonal changes in ecosystems. This unit presents the 'Summer' segment of a four-part series.

### **Autumn Gallery**

### **39. Centipede**

'Crawling' along the ceiling above the Discovery Room entry, a gigantic Centipede wiggles from side to side. This over-scaled exhibit is animated, built from fiberglass and is suitable for an interpretive discussion about 'bad reputations'.

### **40. Little Brown Bat and Gypsy Moth**

An over-scaled, fiberglass Bat closes in on a Gypsy Moth in this display suspended above the Autumn Gallery. It is not animated, and is meant to be used to begin interpretive discussions about 'bad reputations' and adaptations.



#### 41. Saw-Whet Owl

Inside an over-scaled representation of a hollow tree, a fiberglass Saw-Whet Owl occasionally blinks and turns its head. Topics associated with this display include nests and homes (the importance of deadwood), and nocturnal versus diurnal.

#### 42. Legends

Graphic panels and an A/V stand-alone unit present an understanding the ecosystem as told through aboriginal legends.

#### 43. Migration

Numerous animals native to Elk Island migrate each winter. This exhibit consists of a computer game in which the visitor must match the animal with its 'vacation' location.

#### 44. Forest - Above and Below

Consisting of a series of graphic panels and full-scale models in a diorama-like setting, this exhibit describes activities in the mixed or boreal forest ecosystem as creatures get ready for winter. Some creatures will be animated (e.g. Pileated Woodpecker, Red Squirrel).

#### 45. Getting Ready

This display comprises a series of graphic panels and an A/V stand-alone unit discussing how Elk Island's animals prepare themselves for the harsh Alberta winter.

#### 46. Beaver Pond Ecosystem

Another diorama-like exhibit, the Beaver Pond Ecosystem (Autumn display) features full scale models of a beaver pond and its inhabitants just after spring thaw. It also includes graphic panels, and is a complement to the Beaver Pond Ecosystem (Spring display) at the other end of the museum.

#### 47. Animal Oddities case

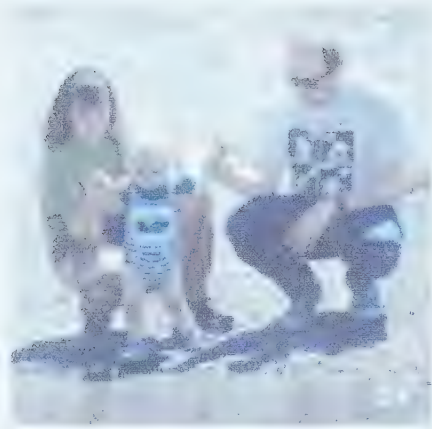
This standardized case unit showcases interesting characteristics and habits of particular animals and plants. This 'mini-display' is to be changed and rotated periodically.

#### 48. Seasonal Change in Ecosystems

This standardized A/V stand-alone discusses the seasonal changes in ecosystems. This unit presents the 'Autumn' segment of a four-part series.



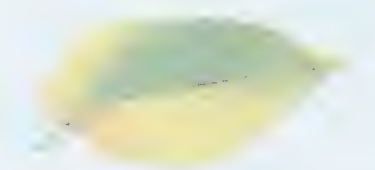
## Conclusion



This museum project presents a Nature Museum and Retreat that is in accordance with the national park mandate of educating visitors about the importance of preserving wilderness. It presents this message through an artistic vision to convince visitors that we are at a crossroads with respect to human life on Earth. If we are to protect our natural areas for future generations, we must act more responsible. McNamee, in Fighting for the Wild in Wilderness, suggests that “in the future, wilderness areas will signal society much like the dove carrying the olive branch to Noah’s ark indicated the threat was passed” (82). Wilderness needs salvation; this museum could be considered an ‘ark’.

One day in the Public Garden I see, on a small patch of grass under some trees, a father and a two-year-old girl. The father is lying down; the little girl runs everywhere. What a joy to run! Suddenly she stops, looks intently at the ground, bends down, picks something up. A twig! A pebble! She stands up, runs again, sees a pigeon, chases it, suddenly stops and looks up into the sunlit trees, seeing what? - perhaps a squirrel, perhaps a bird, perhaps just the shape and colours of leaves in the sun. Then she bends down, finds something else, picks it up, examines it. A leaf! Another miracle. (Holt 303)

This Museum and Nature Retreat proposal acknowledges that one of the biggest challenges facing society today is global ecology. It provides an opportunity to communicate and educate the public about the importance of preserving ecosystems through the preservation of wonder.







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## Photograph/Illustration Credits

1. Donald Moar
2. Donald Moar
3. John Tenniel (from Lewis Carroll's Alice's Adventures in Wonderland)
4. Donald Moar
5. Donald Moar
6. Donald Moar
7. The Walt Disney Company
8. Donald Moar
9. Historic Sites Service, Alberta Community Development
10. Donald Moar
11. Adrian Raeside (published in Edmonton Journal, July 7, 2000)
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22. John Tenniel (from Lewis Carroll's Alice's Adventures in Wonderland)
23. Donald Moar
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37. Megan Tower (age 9)
38. Bentley Houghton (age 9)
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40. Donald and Charmaine Moar
41. Donald and Charmaine Moar
42. Donald and Charmaine Moar
43. Donald and Charmaine Moar
44. Donald and Charmaine Moar
45. Donald Moar
46. Donald Moar
47. Donald Moar



## Appendix





Name SusanGrade 3Number 1My nature museum would be about nature



Name MeganGrade 3

My nature museum would be about...







Name BentleyGrade 3

My nature museum would be about

crawl  
here

Snake

Nature museum  
play housepop  
down  
tigerclimb  
branches

bees

little  
stuffed  
Squirrelbaby  
bear  
a jackladder  
out

enter



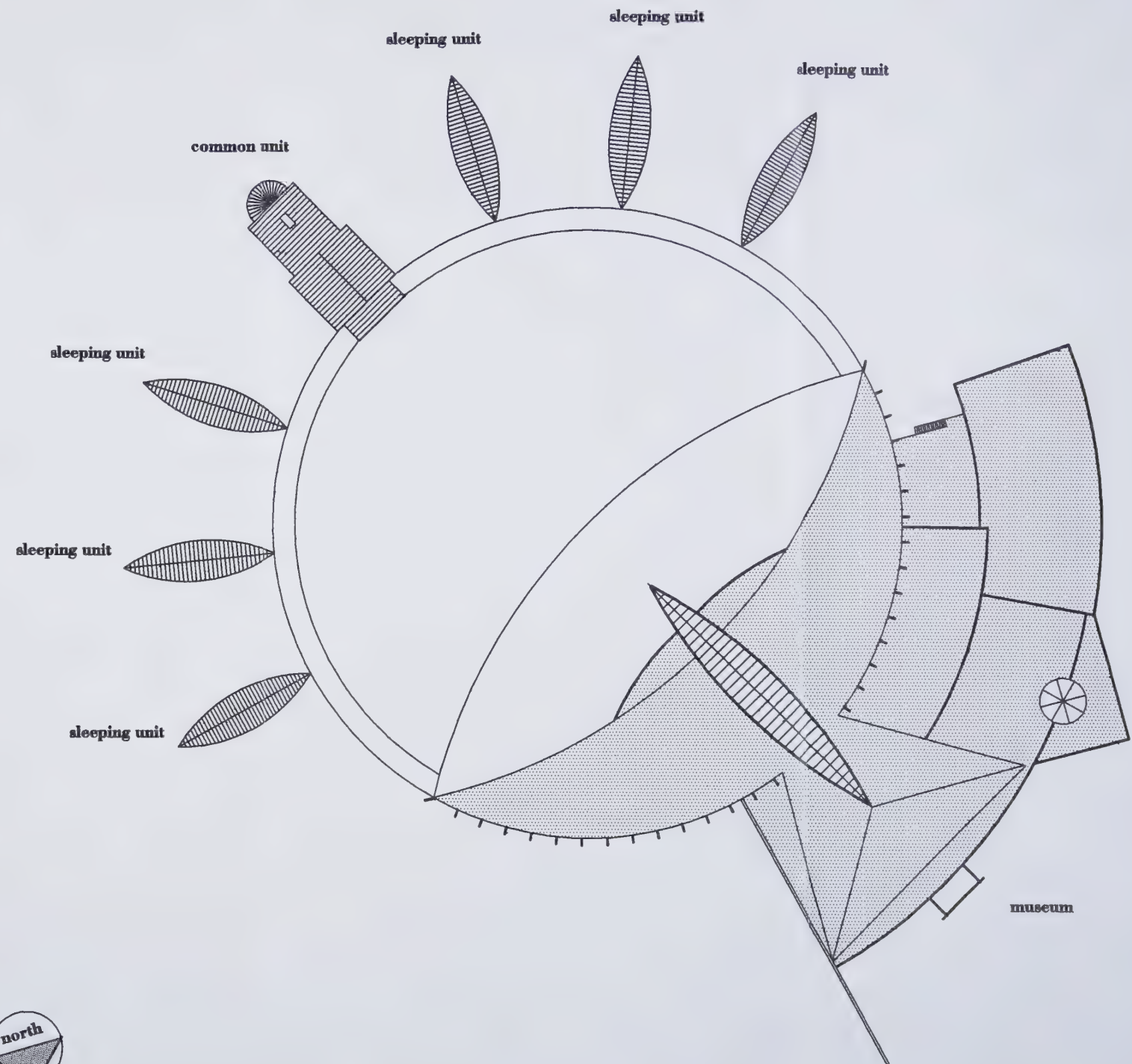




location plan



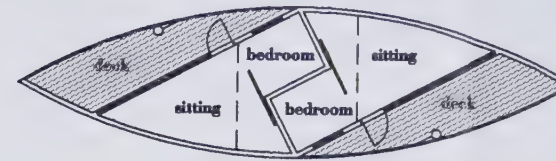
# all buildings



site plan



## sleeping unit



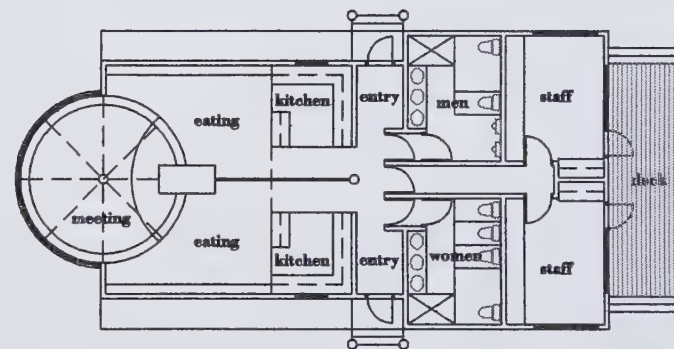
plan



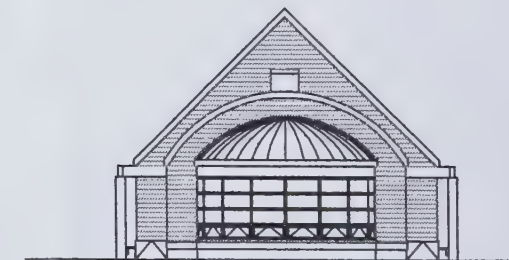
front

side

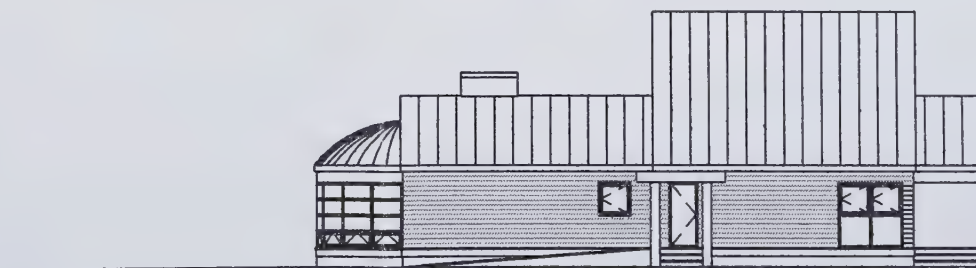
## common unit



plan



front



side



rear





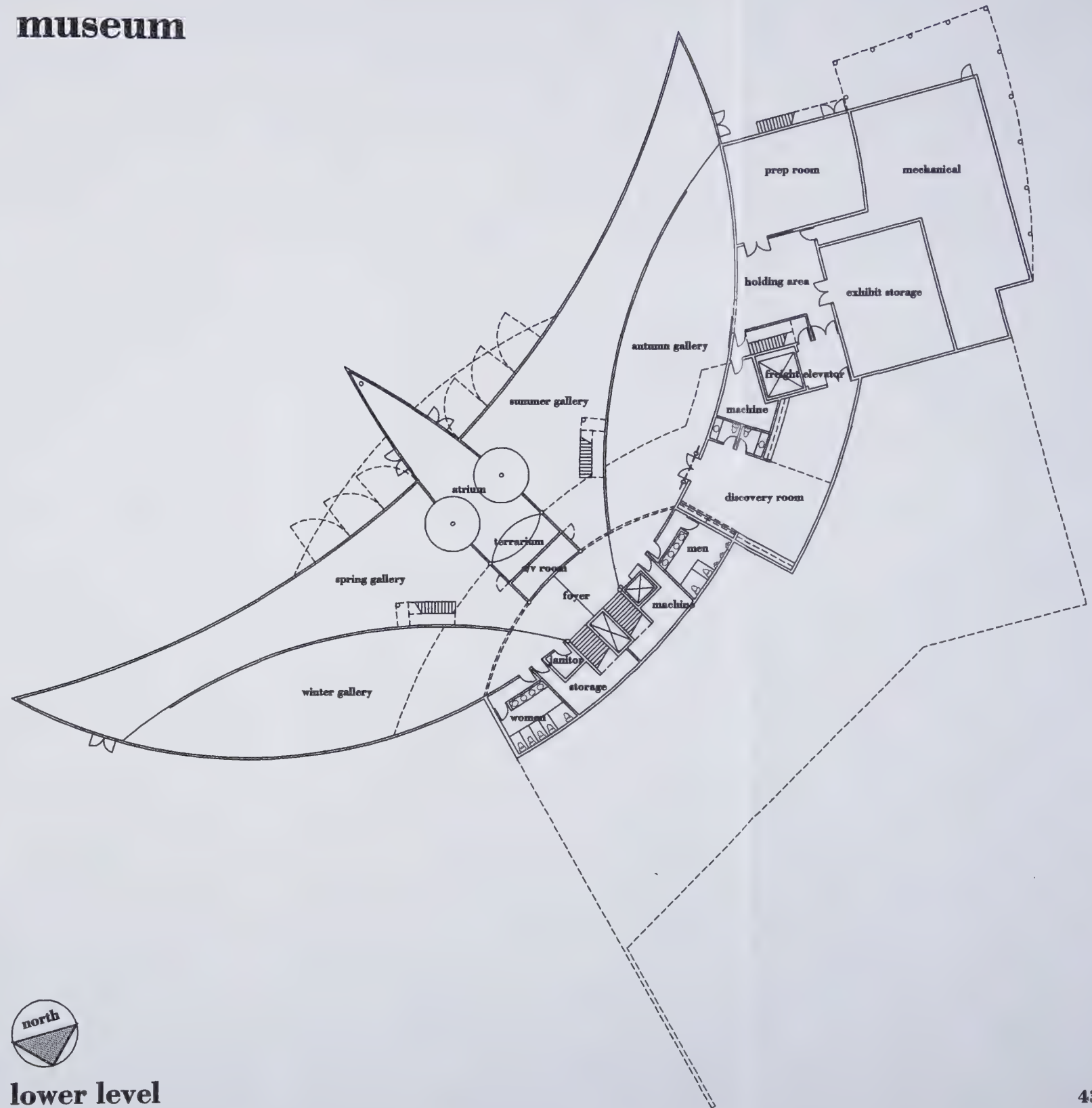
# **museum**



**upper level**



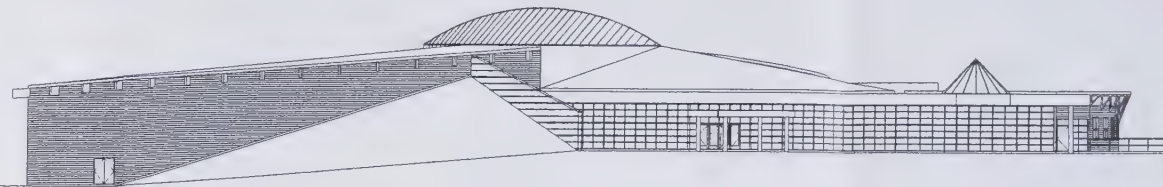
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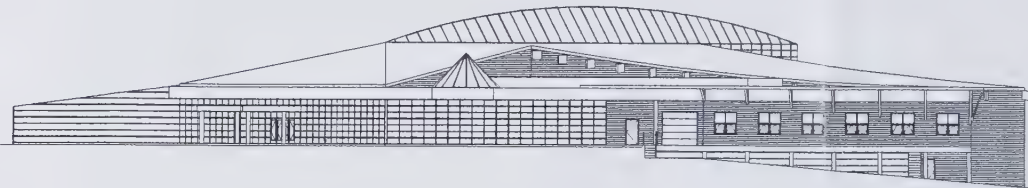
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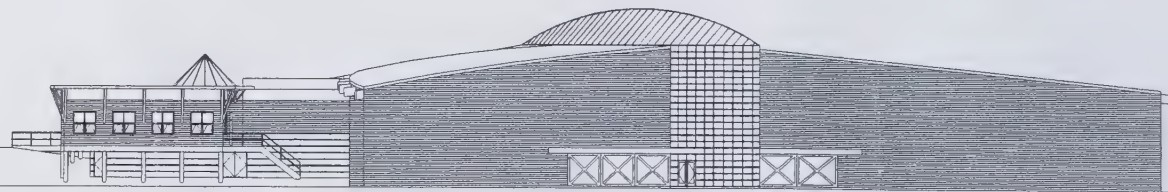
# **museum**



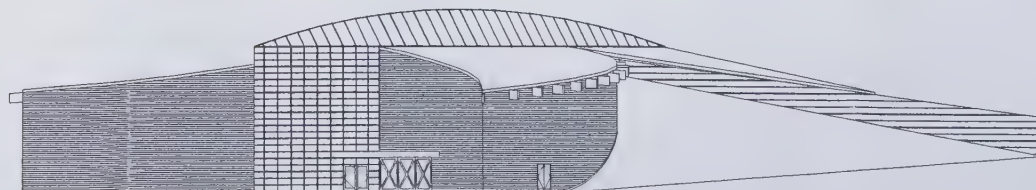
**north**



**west**



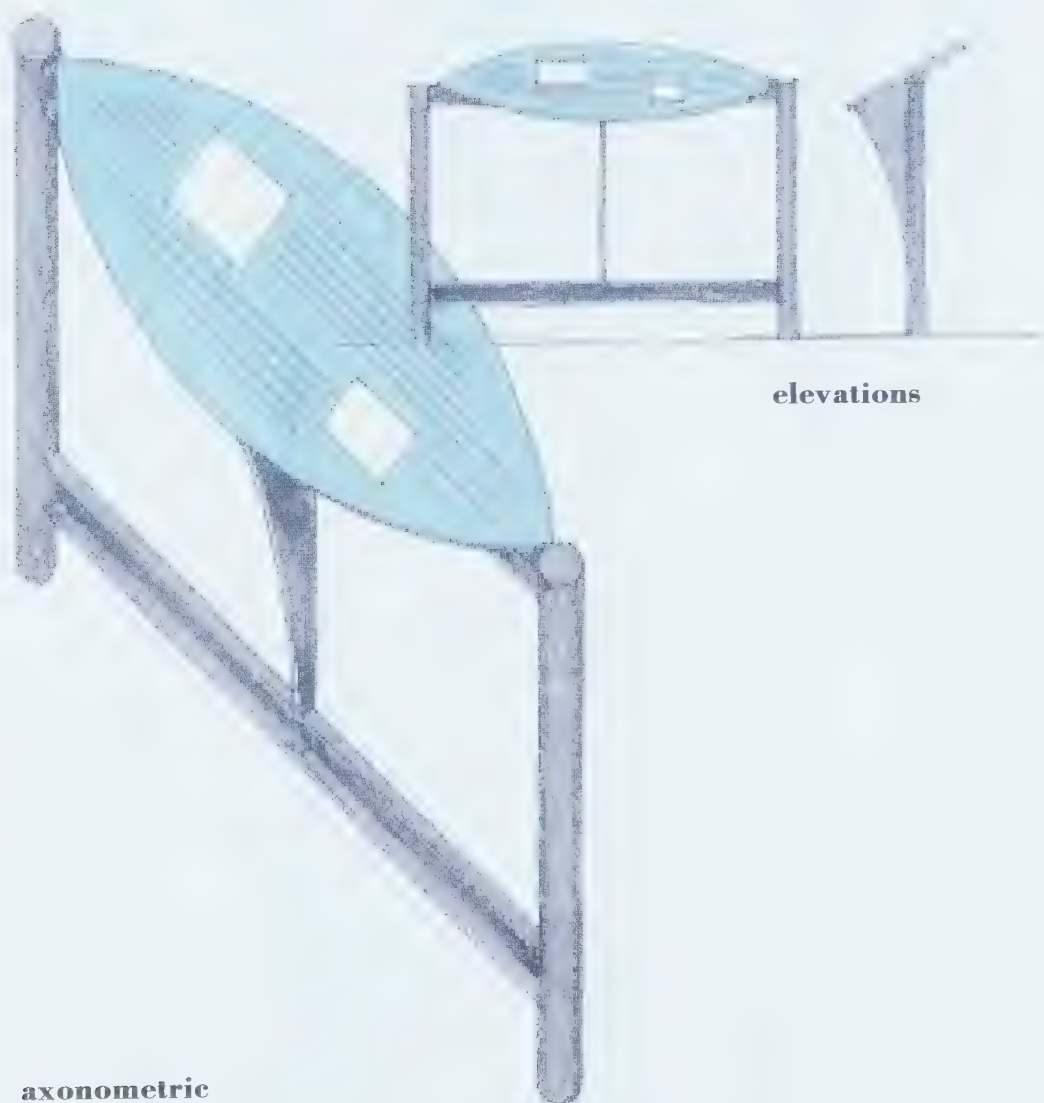
**south**



**east**







**axonometric**

**barrier and panel stand**



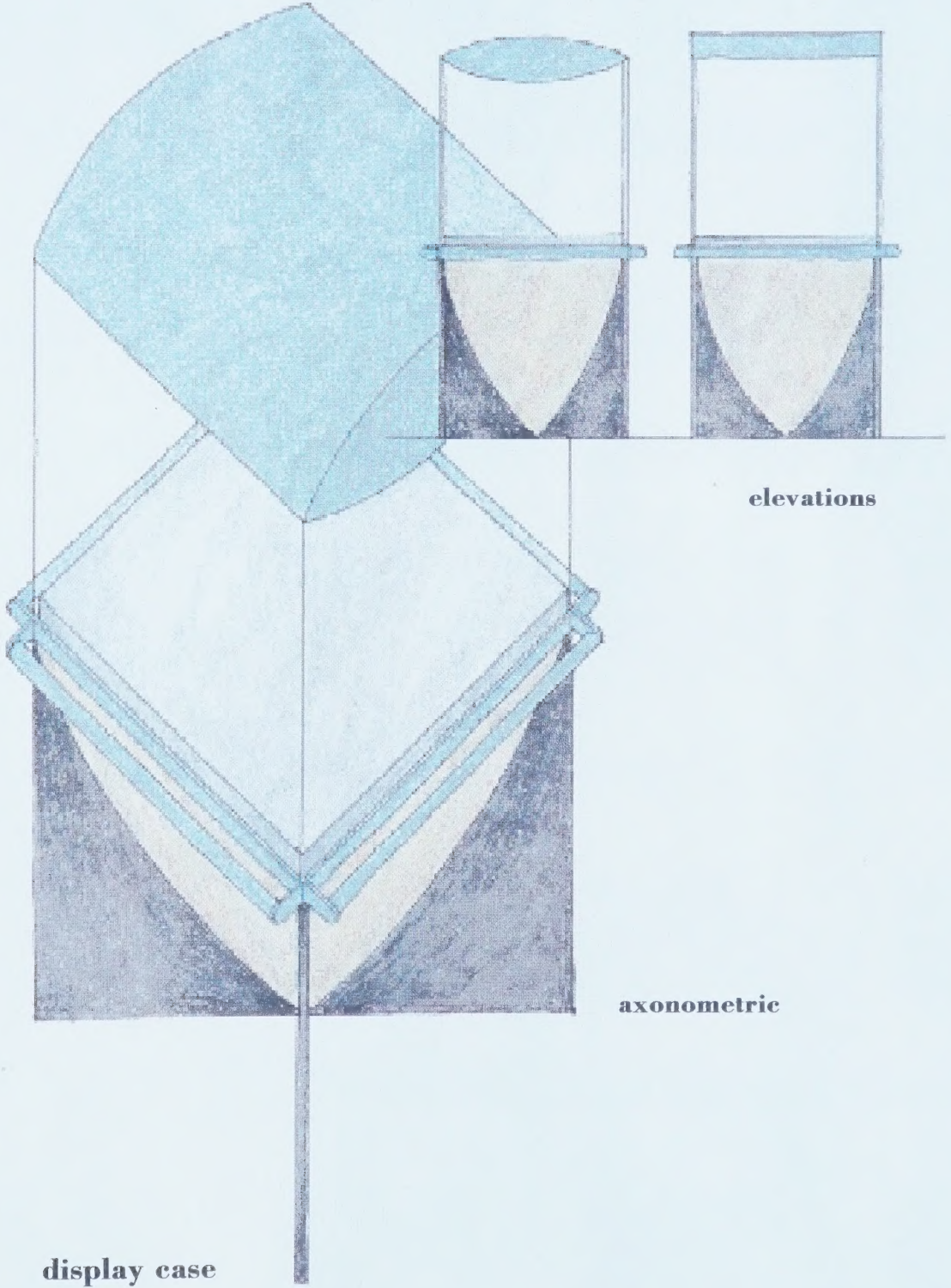


**elevations**

**axonometric**

**a/v stand-alone unit**





display case

axonometric

elevations



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